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ABSTRACT

The purpose of this study was to examine a profile of academic self-concept for a sample of 293 students of a private girls-only high school in Japan as measured by the Dimensions of Self-Concept (DOSC)-Form S, Japanese version (W. Michael and others, 1984). The DOSC-Form S, Japanese version, yields five scores associated with the five underlying dimensions of academic self-concept: Level of Aspiration, Anxiety, Academic Interest and Satisfaction, Leadership and Initiative, and Identification versus Alienation. Past studies involving Japanese college students have reported that Japanese college students display dispositions indicative of low self-concept relative to their American counterparts, but little empirical study has been done on the academic self-concept of Japanese high school students. Japanese high schools constitute a unique subculture within the entire Japanese educational system, characterized by intensive preparation and competition for college entrance. Data from this study show lower academic self-concept for these students compared with U.S. high school students, but the subjects in this study represent only one segment of the diverse Japanese high school population. (Contains 2 tables and 23 references.) (Author/SLD)

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Academic Self-Concept

Academic Self-Concept of Japanese Female Private-High-School Students

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Abstract

The purpose of this study was to examine a profile of academic self-concept for a sample of 293 students of a private girls-only high school in Japan as measured by the Dimensions of Self-Concept (DOSC)-Form S, Japanese version. The DOSC-Form S, Japanese version yields five scores associated with the five underlying dimensions of academic self-concept: Level of Aspiration (LOA), Anxiety (ANX), Academic Interest and Satisfaction (AIAS), Leadership and Initiative (LAI), and Identification versus Alienation (IA). Past studies involving Japanese college students have reported that Japanese college students display dispositions indicative of low self-concept relative to their American counterparts. Little empirical study has been done on the academic self-concept of Japanese high-school students. Japanese high schools constitute a unique subculture within the entire Japanese educational system, characterized by intensive preparation and competition for college entrance examination. This paper employs empirical data analyses to investigate how academic self-concept develops among a group of Japanese high school students enduring the pressure of academic excellence in a competitive school environment.

Academic Self-Concept
of Female Japanese Private-High-School Students

Introduction

This paper presents a profile of academic self-concept for a group of students attending a private girls-only college-preparatory high school in Japan. The Dimensions of Self-Concept Scale (DOSC)-Form S, Japanese version served as the measurement instrument. A previous study (Paik and Michael, in press) of this instrument verified the reliability and construct validity of this instrument using a sample of 350 students at girls-only private high schools in Japan. The present study is based on a subset of 293 subjects from the previous study.

Past studies (Chandler, Shama, Wolf, and Planchard, 1981; Hymes and Akiyama, 1991; Kashima and Triandis, 1986) involving Japanese college students report that, in comparison to American students, Japanese students tend to display dispositions indicative of lower self-concept. Little empirical study has been done on the academic self-concept of Japanese high-school students. Japanese high schools constitute a unique subculture within the entire Japanese educational system, characterized by intense preparation for college entrance examinations. This study examines the attitudes, feelings, and opinions of a group of Japanese

high-school students towards school-related matters through empirical data analyses. This paper also compares the data obtained from the Japanese high school students with those available from U.S. high school students.

Background

As a supporting factor to academic excellence, academic self-concept has attracted attention from many psychologists and educators. Past studies on self-concept reported positive correlations between self-concept and: (1) communication skills (Hansford and Hattie, 1987a, 1987b), (2) versatile study skills (Watkins and Hattie, 1985, 1990), (3) positive attitudes toward the school establishment (Fraser and Fisher, 1983), and (4) internal locus of control (Marsh, Cairns, Relich, Barnes, and Debus, 1984; Martin, 1978; Reid, Haas, and Hawkins, 1977).

Researchers in social psychology (Weiner, 1979, 1986; Fitch, 1970) discuss self-concept in relation to one's perception of causes for success and failure. They argue that a person with high self-concept is more likely to attribute success to internal factors (ability and effort) and failure to external factors (luck and environment), while a person with low self-concept is more likely to attribute success to external factors and failure to internal factors. Thus low self-concept is

associated with a tendency to blame oneself for failure while denying oneself credit for success. Cross-cultural studies in this line of investigation involving Japanese college students (Chandler, *et al.*, 1981; Hymes, *et al.*, 1990; Kashima, *et al.*, 1986) report that Japanese college students compared with their American counterparts display a stronger tendency to blame themselves in unfavorable situations and deny themselves in favorable situations, suggesting lower self-concept.

The development of self-concept largely depends on a person's experience with his or her environment (Shavelson, Hubner, and Stanton, 1976). Japanese high schools often become a place of fierce competition for college entrance examination. Academic pressure on students of this particular age group results in what many refer to as "examination hell" and sometimes even in school related suicides. Highly competitive educational programs reportedly diminish students' self-concept (Marsh, 1987; Strein, 1989).

The present study presents and discusses a profile of academic self-concept for a group of Japanese high school students as measured by the five-factor DOSC, Form S, Japanese version. The present study also compares

academic self-concept between Japanese and American high-school students, with the expectation that Japanese high school students should score relatively low in all the indicators but one (i.e., Anxiety) on the DOSC, Form.

Purpose

The purpose of this paper is to present a profile of academic self-concept as measured by the Dimensions of Self-Concept (DOSC)-Form S, Japanese version, for a sample of 293 students attending a girls-only private college-preparatory high school in Japan. The paper reports the scores on each of the five subscales of the DOSC-Form S (Aspiration, Anxiety, Academic Interest and Satisfaction, Leadership and Initiative, and Identification versus Alienation) and compares them with those available from the normative data for the English version of the same questionnaire, a sample of 271 students attending a co-educational public high school in the U.S.A. As a prelude to future studies of the interactions and causal relationships among the dimensions of academic self-concept, this paper includes an analysis of the efficacy of each of the five factors as a predictor for the others.

Method

Sample

A total of 293 female high school students attending a private Catholic high school in a suburb of Tokyo completed the DOSC, Form S, Japanese version. (A sample of 56 students at a second school, used in the validity study for the Form S, Japanese version, was not used in this study). The school is a college-preparatory high school for girls only, where academic excellence as well as Christian values are stressed. The students were freshmen, sophomores, and seniors, equivalent to the 10th, 11th, and 12th grade in the U.S.A. They are primarily from suburban, middle-class families.

Instrument

Michael and Smith (1984) conceptualized academic self-concept in terms of students' attitudes, feelings, and opinions specific to learning and school environment. They hypothesized five indicators associated with high or low self-concept. They are Level of Aspiration (LOA), Anxiety (ANX), Academic Interest and Satisfaction (AIAS), Leadership and Initiative (LAI), and Identification vs. Alienation (IA). Their theoretical framework of academic self-concept dictates that students with high academic self-concept would score high on the positive

indicators, that is, LOA, AIAS, LAI, IA and low on the negative indicator that is ANX; students with low academic self-concept, on the contrary, would score low on the positive indicators and high on the negative indicator.

This rationale laid the foundation for the development of the self-concept scale entitled the Dimensions of Self-Concept (DOSC) (Michael *et al.*, 1984). Form S of the DOSC is specialized for use in secondary schools. The DOSC-Form S is a self-reporting questionnaire consisting of 70 items. It yields scores for the five underlying dimensions of academic self-concept. For each item the subjects rate their attitudes, opinions, and feelings toward school-related matters on a five-point Likert-format scale: Never=1, Seldom=2, About a Half the Time=3, Often=4, Always=5. For each dimension measured the possible range of score is from a minimum of 14 to a maximum of 70, with higher scores indicating a greater degree of the given dimension.

A previous study (Paik, *et al.*, in press) of the Japanese version of the DOSC-Form S reported internal consistency reliability of .84, .71, .73, .84, .77 for LOA, ANX, AIAS, LAI, IVA respectively. As evidence of construct validity, the same study found confirmatory factor analyses afforded the best fit to a five-factor model among several competing models.

Procedure

The investigator mailed the DOSC-Form S to the principal of the participating high school. It was then distributed to the subjects through their homeroom teachers. The students completed the questionnaire on their own time and handed them back to their respective homeroom teachers. The principal collected the completed questionnaires through the homeroom teachers and mailed them back to the investigator.

Data Analyses

Mean scores and standard deviations for each of the five dimensions of the DOSC-Form S, Japanese version were calculated. These were compared with the normative data available from the study involving the U.S. high school students. To examine the statistical significance of differences between the mean scores of the two sample populations a series of Z-tests were performed. To examine the efficacy of each dimension as a predictor for the others, linear regressions were calculated for all five factors in terms of each individual factor, and the associated residual variances were compared using *F*-ratios.

Results

Table 1 shows the means and standard deviations of scores on the five subscales of the DOSC for the Japanese and the U.S. samples.

Insert Table 1 about here

The results of a series of Z-tests indicated that all the differences observed between the Japanese sample and the U.S. sample were statistically significant as follows:

(1) The Japanese sample scored lower in the Level of Aspiration dimension than the U.S. sample, $Z = -16.07$, $p < .0004$.

(2) The Japanese sample scored higher in the Anxiety dimension than the U.S. sample, $Z = 5.58$, $p < .0004$.

(3) The Japanese sample scored lower in the Academic Interest and Satisfaction dimension than the U.S. sample, $Z = -9.37$, $p < .0004$.

(4) The Japanese sample scored lower in the Leadership and Initiative dimension than the U.S. sample, $Z = -16.67$, $p < .0004$.

(5) The Japanese sample scored lower in the Identification vs. Alienation dimension than the U.S. sample, $Z = -6.98$, $p < .0004$.

Table 2 shows the correlation matrix of scores on the five subscales.

Insert Table 2 about here

This matrix was used to compare the predictive power of each dimension relative to the others as follows. The smallness of the residual variance for a linear regression of all dimensions (normalized so that variance of each dimension is 1) in terms of a given single dimension j was taken as an indicator of the predictive power of that dimension. This residual variance (in proportion to the total variance of all dimensions) was calculated as $1 - \sum r_{ij}^2$, where r_{ij} is the correlation of dimensions i and j . This proportion of residual error for each is found as: ASP = .636, ANX = .776, AIAS = .642, LAI = .642, IVA = .664. It thus appears that ASP is the most useful as a predictor of all dimensions, while ANX is least useful. As a test of significance, F -ratios were calculated for all pairs of dimensions (285 samples being used for the correlation calculations, and 1 dimension used as a predictor, the degrees of freedom for both numerator and denominator is 283). The only statistically significant differences found were between ANX and the other dimensions; for ASP vs. ANX, $F(283, 283) = 1.22$, $p = .05$; for AIAS vs.

ANX, $F(283,283) = 1.21, p=.06$; for LAI vs. ANX, $F(283,283) = 1.21, p=.06$; for IVA vs. ANX, $F(283,283) = 1.17, p=.10$. The scores of the ASP subscale were not found to be the most useful as a predictor of scores of all other dimensions, whereas the scores of ANX subscale was found to be truly least useful for predicting the scores of all other dimensions.

Discussion

The Japanese high school students in this study, compared with the U. S. high school students revealed lower academic self-concept as indicated in the scores on the five subscales of the DOSC. There were no bases for equivalency for the two sample groups employed in this study except the fact that they both consisted of high school students. The Japanese subjects were all girls, primarily from suburban middle-class families, attending a private Catholic school, and pursuing a college-track academic program. The U.S. subjects were both boys and girls, drawn from a large metropolitan school district, representing diverse social, ethnic, and academic backgrounds. Still striking differences on scores of the DOSC subscales between the two population samples call for explanation.

The competitive nature of the academic program as well as parental and institutional expectations for academic excellence placed on the students might

well explain a higher level of anxiety felt by the Japanese students. A focus on competition rather than collaboration of the entire educational system is more likely to foster a sense of isolation and alienation among students. Low scores on the Identification vs. Alienation subscale might be understood as the consequence of such a circumstance. Low scores on Leadership and Initiative subscale might be attributed to the Japanese cultural in general, or more immediately the Japanese school and home environment which seem to emphasize obedience and modesty in the upbringing of girls. Catholic schools might emphasize these values even more strongly. Academic interest and satisfaction showed the highest mean score among the five subscales and yet lower relative to the U.S. sample. The curriculum in Japanese high schools, college-preparatory schools in particular, centers around preparation for college entrance examinations. Instruction often disregards students' individuality and creativity. This might explain a low score on the Academic Interest and Satisfaction subscale as well as the Aspiration subscale among the Japanese subjects.

Researchers (Weisz, Rothbaum, & Blackburn, 1984) discuss the self-derogating nature of collective cultures as opposed to the self-enhancing nature of individualistic cultures. Japan as a collective society encourages

individuals to fit into a system, not to stand out or seek prominence. The society as such is likely to encourage less self-enhancement. A study by the National Association of Secondary School Principals (1995) summarizes the educational experiences of Japanese high school students as totally shaped by the importance of the development of group citizenship and common fundamental academic ability. Pressure to achieve a common goal regardless of individuals' heterogeneous interests and abilities is less likely to produce aspiring, self-directed, and motivated students. This is evident in the scores on the DOSC obtained from the Japanese high school students in this study.

Conclusion

As predicted the Japanese high school students showed a lower academic self-concept compared with the U.S. high schools students. However, one should not conclude that Japanese high school students form a uniform group with uniform academic self-concept. Cultures embrace subcultures separated by boundaries of age, gender, educational programs, and socio-economic background. The subjects in this study represented merely one segment of a diverse Japanese high school student population. One needs further investigation employing diverse samples of Japanese high-school students in order to truly

understand how academic self-concept develops in their culture. Future cross-cultural investigations should seek comparative samples in both countries.

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Table 1

Mean and Standard Deviation for each of the five subscales of the DOSC, Form S

	Japan (<i>N</i> =293)		U.S.A. (271< <i>N</i> <281)*	
	Mean	SD	Mean	SD
Level of Aspiration	39.6	7.9	50.9	8.7
Anxiety	37.9	7.3	34.1	8.7
Academic Interest	41.9	7.3	47.8	7.6
and Satisfaction				
Leadership and	33.6	8.1	45.3	8.5
Initiative				
Identification vs.	41.4	7.0	45.5	6.9
Alienation				

Note: The U.S.A. data was taken from normative data published by Michael and Smith (1989)

Table 2

Intercorrelations between subscales for Japanese Samples (N=293)

	Asp	Anx	Aias	Lai	Iva
Asp	1.00	-.10	.49	.48	.57
Anx	.10	1.00	-.08	-.31	-.04
Aias	.49	-.08	1.00	.57	.46
Lai	.48	-.31	.57	1.00	.37
Iva	.57	-.04	.46	.37	1.00

Table 2

Intercorrelations between subscales for Japanese Samples (N=285)

	Asp	Anx	Aias	Lai	Iva
Asp	1.00	-.10	.49	.48	.57
Anx	.10	1.00	-.08	-.31	-.04
Aias	.49	-.08	1.00	.57	.46
Lai	.48	-.31	.57	1.00	.37
Iva	.57	-.04	.46	.37	1.00